

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1-28 and add new claims 29-61.

Listing of Claims

Claims 1-28 (canceled)

Claim 29 (new): A biocompatible tissue repair composition, comprising:

bone powder,

a therapeutic material, and

a carrier that exhibits reverse phase behavior when its temperature is increased from ambient to body temperature.

Claim 30 (new): The composition of claim 29, wherein the bone powder is demineralized bone powder or mineralized bone powder.

Claim 31 (new): The composition of claim 29, wherein the therapeutic material is osteoinductive, osteoconductive, or both osteoinductive and osteoconductive.

Claim 32 (new): The composition of claim 29, wherein the therapeutic material is alloplastic, xenogeneic, allogeneic, autogenic or a combination thereof.

Claim 33 (new): The composition of claim 32, wherein the alloplastic therapeutic material is natural hydroxyapatite, synthetic hydroxyapatite, calcium carbonate, calcium phosphate, calcium sulfate, a biodegradable polymeric material, or a combination thereof.

Claim 34 (new): The composition of claim 29, wherein the therapeutic material is tissue growth factor beta (TGF- β) type 1, tissue growth factor beta type 2, tissue growth factor beta type 3, tissue growth factor beta type 4, tissue growth factor beta type 5, tissue growth factor beta type 6, tissue growth factor beta type 7, tissue growth factor beta type 8, tissue growth factor beta type 9, tissue growth factor beta type 10, tissue growth factor

beta type 11, tissue growth factor beta type 12, tissue growth factor beta type 13, bone morphogenetic protein (BMP) type 1, bone morphogenetic protein type 2, bone morphogenetic protein type 3, bone morphogenetic protein type 4, bone morphogenetic protein type 5, bone morphogenetic protein type 6, bone morphogenetic protein type 7, bone morphogenetic protein type 8, bone morphogenetic protein type 9, bone morphogenetic protein type 10, bone morphogenetic protein type 11, bone morphogenetic protein type 12, bone morphogenetic protein type 13, bone morphogenetic protein type 14, bone morphogenetic protein type 15, or a combination thereof.

Claim 35 (new): The composition of claim 29, wherein the carrier comprises a solvent.

Claim 36 (new): The composition of claim 35, wherein the solvent is water.

Claim 37 (new): The composition of claim 35, wherein the carrier is 25 weight percent block copolymer dispersed in 75 weight percent solvent.

Claim 38 (new): The composition of claim 29, comprising 30 weight percent bone powder and therapeutic material and 70 weight percent carrier.

Claim 39 (new): The composition of claim 29, comprising 50 weight percent bone powder and therapeutic material and 50 weight percent carrier.

Claim 40 (new): The composition of claim 29, wherein the carrier comprises a poloxamer.

Claim 41 (new): The composition of claim 29, wherein the carrier comprises a block copolymer.

Claim 42 (new): The composition of claim 29, wherein the carrier comprises a poly(oxyalkylene) block copolymer.

Claim 43 (new): The composition of claim 42, wherein the poly(oxyalkylene) block copolymer is Pluronic[®] F127.

Claim 44 (new): The composition of claim 29, further comprising an antibiotic, an analgesic, an anti-inflammatory agent, an agent to promote development of a connective system tissue, an agent to promote development of a circulatory system tissue, or a combination thereof.

Claim 45 (new): A method to facilitate the development of bone tissue comprising:

placing a biocompatible tissue repair composition at a bone defect site, wherein the biocompatible tissue repair composition comprises:

bone powder;

a therapeutic material, and

a carrier that exhibits reverse phase behavior when its temperature is increased from ambient to body temperature.

Claim 46 (new): A biocompatible tissue repair composition, comprising:

bone powder;

a therapeutic material, and

a biocompatible carrier that is more flowable at ambient temperature than at an elevated temperature.

Claim 47 (new): The composition of claim 46, wherein the bone powder is demineralized bone powder or mineralized bone powder.

Claim 48 (new): A biocompatible tissue repair composition, comprising:

a biocompatible carrier that is more flowable at ambient temperature than at an elevated temperature; and

natural hydroxyapatite, synthetic hydroxyapatite, calcium carbonate, calcium phosphate, calcium sulfate, a biodegradable polymeric material, a bone morphogenetic protein (BMP) or a combination thereof.

Claim 49 (new): The composition of claim 48, wherein the bone morphogenetic protein is bone morphogenetic protein type 1, bone morphogenetic protein type 2, bone morphogenetic protein type 3, bone morphogenetic protein type 4, bone morphogenetic protein type 5, bone morphogenetic protein type 6, bone morphogenetic protein type 7, bone morphogenetic protein type 8, bone morphogenetic protein type 9, bone morphogenetic protein type 10, bone morphogenetic protein type 11, bone morphogenetic protein type 12, bone morphogenetic protein type 13, bone morphogenetic protein type 14, bone morphogenetic protein type 15, or a combination thereof.

Claim 50 (new): The composition of claim 48, further comprising a tissue growth factor beta (TGF- β), an antibiotic, an analgesic, an anti-inflammatory agent, an agent to promote development of a connective system tissue, an agent to promote development of a circulatory system tissue, or a combination thereof.

Claim 51 (new): The composition of claim 50, wherein the tissue growth factor beta is tissue growth factor beta type 1, tissue growth factor beta type 2, tissue growth factor beta type 3, tissue growth factor beta type 4, tissue growth factor beta type 5, tissue

growth factor beta type 6, tissue growth factor beta type 7, tissue growth factor beta type 8, tissue growth factor beta type 9, tissue growth factor beta type 10, tissue growth factor beta type 11, tissue growth factor beta type 12, tissue growth factor beta type 13, or a combination thereof.

Claim 52 (new): The composition of claim 48, wherein the carrier comprises a solvent.

Claim 53 (new): The composition of claim 52, wherein the solvent is water.

Claim 54 (new): The composition of claim 52, wherein the carrier is 25 weight percent block copolymer dispersed in 75 weight percent solvent.

Claim 55 (new): The composition of claim 48, comprising 70 weight percent carrier and 30 weight percent natural hydroxyapatite, synthetic hydroxyapatite, calcium carbonate, calcium phosphate, calcium sulfate, a biodegradable polymeric material, a bone morphogenetic protein (BMP) or a combination thereof.

Claim 56 (new): The composition of claim 48, comprising 50 weight percent carrier and 50 weight percent natural hydroxyapatite, synthetic hydroxyapatite, calcium carbonate, calcium phosphate, calcium sulfate, a biodegradable polymeric material, a bone morphogenetic protein (BMP) or a combination thereof.

Claim 57 (new): The composition of claim 48, wherein the carrier comprises a poloxamer.

Claim 58 (new): The composition of claim 48, wherein the carrier comprises a block copolymer.

Claim 59 (new): The composition of claim 48, wherein the carrier comprises a poly(oxyalkylene) block copolymer.

Claim 60 (new): The composition of claim 59, wherein the poly(oxyalkylene) block copolymer is Pluronic[®] F127.

Claim 61 (new): The composition of claim 48, further comprising an antibiotic, an analgesic, an anti-inflammatory agent, an agent to promote development of a connective system tissue, an agent to promote development of a circulatory system tissue, or a combination thereof.